

Application No. 10/047,507
Amendment dated March 1, 2005
Reply to Office Action of December 15, 2004

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) An apparatus for attaching a conduit to at least one of a heart and a blood vessel, said apparatus comprising:
 - a. an enclosure having an attachment portion adapted for attachment to a wall of said heart or blood vessel, said attachment portion separable from a remainder of said enclosure such that said attachment portion remains attached to said wall of said heart or blood vessel once attached thereto;
 - b. a tool having a first portion for creating an opening through said wall, said first portion contained within said enclosure; and
 - c. a conduit having a first end attachable to said attachment portion, said first end contained within said enclosure, wherein said first end of said conduit is attachable to secured in said opening through said wall of said heart or blood vessel via by said attachment portion.
2. (Original) The apparatus of claim 1 further comprising said enclosure being sealed and having air evacuated therefrom prior to attachment to said wall.
3. (Original) The apparatus of claim 2 further comprising said enclosure filled with fluid.
4. (Previously presented) The apparatus of claim 1 wherein said attachment portion further comprises a sewing cuff.

5. (Original) The apparatus of claim 4 further comprising an opening through said attachment member and said enclosure such that said enclosure is sealed only when said attachment member is attached to said wall.

6. (Original) The apparatus of claim 5 further comprising said enclosure having air evacuated therefrom.

7. (Original) The apparatus of claim 6 further comprising said enclosure being filled with fluid.

8. (Original) The apparatus of claim 1 further comprising a port in said enclosure for evacuating air from said enclosure.

9. (Original) The apparatus of claim 1 further comprising said tool having a second portion external to said enclosure, said second portion manipulable to cause said first portion to create said opening.

10. (Original) The apparatus of claim 1 wherein said first portion further comprises a holding member.

11. (Original) The apparatus of claim 1 wherein said tool further comprises:

a. a central rod member having a holding member at said first portion of said tool contained within said enclosure;

b. a barrel member rotatably surrounding said central rod portion, said barrel member having a cutting blade at said first portion of said tool contained within said enclosure;

c. said central rod member manipulable to engage said holding member with tissue to be cut away by said cutting blade; and

d. said barrel member manipulable to cause said cutting blade to cut away tissue to create said opening.

12. (Original) The apparatus of claim 11 further comprising said enclosure sealed around said barrel member in a manner permitting rotation of said barrel member.

13. (Original) The apparatus of claim 1 further comprising said conduit having a second end external to said enclosure.

14. (Original) The apparatus of claim 13 wherein said first end is adapted for attachment to a heart and further comprising said second end being connectable to a blood pump.

15. (Previously presented) The apparatus of claim 14 wherein said first end is adapted for attachment to a blood vessel at a first location and further comprising said second end being connectable to a blood pump.

16. (Previously amended) A method of attaching a conduit to a wall of at least one of a heart and a blood vessel, said method comprising:

- a. attaching an attachment portion of an enclosure to said wall;
- b. enclosing within said enclosure at least a first portion of a tool for creating an opening through said wall;
- c. enclosing at least one end of said conduit within said enclosure;
- d. evacuating air from said enclosure;
- e. creating said opening through said wall using said tool;
- f. securing said one end of said conduit to said attachment portion; and
- g. separating said attachment portion from a remainder of said enclosure such that said remainder is removable after said conduit is secured to said attachment portion.

17. (Original) The method of claim 16 further comprising filling said enclosure with fluid to evacuate said air.

18. (Original) The method of claim 16 further comprising entirely sealing said enclosure prior to attachment to said wall.

19. (Original) The method of claim 18 further comprising:
- a. first evacuating air from said enclosure; and
 - b. subsequently attaching said enclosure to said wall.

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20. (Original) The method of claim 19 further comprising filling said enclosure with fluid to evacuate said air.

21. (Previously cancelled) The method of claim 19 further comprising:

- a. affixing an attachment member to said enclosure; and
- b. attaching said attachment member to said wall.

22. (Previously cancelled) The method of claim 16 further comprising:

- a. affixing an attachment member to said enclosure; and
- b. attaching said attachment member to said wall.

23. (Previously presented) The method of claim 16 further comprising:

- a. providing an opening through said attachment member and said enclosure;
- b. thereafter attaching said attachment member to said wall; and
- c. subsequently evacuating air from said enclosure.

24. (Original) The method of claim 23 further comprising filling said enclosure with fluid to evacuate said air.

25. (Previously presented) An apparatus for attaching a conduit to a wall of at least one of a heart and a blood vessel, said apparatus comprising:

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- a. a sealed enclosure having air evacuated therefrom, said sealed enclosure having an attachment portion adapted for attachment to said wall, said attachment portion detachable from a remainder of said sealed enclosure;
- b. a tool having a first portion for creating an opening through said wall, said first portion contained within said sealed enclosure; and
- c. a conduit having a first end attachable to said attachment portion, said first end contained within said sealed enclosure.

26. (Original) The apparatus of claim 25 further comprising said sealed enclosure being filled with fluid.

27. (Previously presented) The apparatus of claim 25 wherein said attachment portion further comprises a sewing cuff.

28. (Original) The apparatus of claim 25 further comprising a port in said enclosure for evacuating air from said enclosure.

29. (Original) The apparatus of claim 25 further comprising said tool having a second portion external to said enclosure, said second portion manipulable to cause said first portion to create said opening.

30. (Original) The apparatus of claim 25 wherein said first portion further comprises a holding member.

31. (Original) The apparatus of claim 25 wherein said tool further comprises:

- a. a central rod member having a holding member at said first portion of said tool contained within said enclosure;
- b. a barrel member rotatably surrounding said central rod portion, said barrel member having a cutting blade at said first portion of said tool contained within said enclosure;
- c. said central rod member manipulable to engage said holding member with tissue to be cut away by said cutting blade; and
- d. said barrel member manipulable to cause said cutting blade to cut away tissue to create said opening.

32. (Original) The apparatus of claim 25 further comprising said enclosure sealed around said barrel member in a manner permitting rotation of said barrel member.

33. (Original) The apparatus of claim 25 further comprising said conduit having a second end external to said enclosure.

34. (Original) The apparatus of claim 33 wherein said first end is adapted for attachment to a heart and further comprising said second end being connectable to a blood pump.

35. (Original) The apparatus of claim 33 wherein said first end is adapted for attachment to a blood vessel at a first location and further comprising said second end being connectable to said blood pump.

36. (Previously presented) A method of attaching a conduit to a wall of at least one of a heart and a blood vessel, said method comprising:

- a. evacuating air from a sealed enclosure;
- b. enclosing within said sealed enclosure at least a portion of a tool used for creating an opening through said wall;
- c. enclosing an end of a conduit within said sealed enclosure;
- d. attaching a portion of said sealed enclosure to said wall;
- e. creating said opening in said wall using said tool; and
- f. attaching said end of said conduit at said opening to said portion of said sealed enclosure; and
- g. separating a remainder of said sealed enclosure from said portion thereof attached to said wall.

37. (Previously cancelled) The method of claim 36 wherein said sealed enclosure includes an attachment member affixed thereto and wherein attaching said sealed enclosure to said wall further comprises attaching said attachment member to said wall.

38. (Previously presented) The method of claim 36 further comprising filling said enclosure with fluid to evacuate said air.

39. (Previously cancelled) A sewing cuff comprising:

- a. a first side adapted for attachment to a left ventricular apex of a heart,
- b. a second side connectable with a first end of a conduit, a second end of said conduit attachable a blood pump; and
- c. an electrode portion adjacent said apex and electrically connected with at least a defibrillation device.

40. (Previously cancelled) A conduit adapted for attachment to a wall of a heart or blood vessel, said conduit comprising:

- a. a cannula portion adapted for attachment in an opening in a wall of at least one of a heart and a blood vessel;
- b. a tip portion on said cannula, said tip portion expandable after insertion through said opening to engage an inner surface of said wall and prevent withdraw of said tip portion therefrom; and
- c. a plurality of circumferential grooves adjacent said tip portion along a longitudinal axis of said conduit, said plurality of circumferential grooves providing axial adjustment of said tip portion in said opening to permit a close fit between said tip and said inner surface.

41. (Previously cancelled) A conduit adapted for attachment to a wall of a heart or blood vessel, said conduit comprising:

- a. a cannula portion adapted for attachment in an opening in a wall of at least one of a heart and a blood vessel;
- b. a vascular graft portion extending from said cannula portion to an opposite end of said conduit;
- c. a least one stiffening member encircling said vascular graft portion between said cannula portion and said opposite end.

42. (Previously cancelled) The conduit of claim 41 wherein said at least one stiffening member further comprises a plurality of stiffening members encircling said vascular graft portion at spaced apart locations between said cannula portion and said opposite end.